

ANGLE OF ATTACK

recently read an article which referred to our US forces deployed for Operation Desen Shield as the first team. I too salute our deployed TAC and TAC-gained forces for the outstanding mission accomplishments and sacrifices they are making on a daily basis. But, I know from experience that the first team extends well beyond the heat of the Middle East, for we each have a vital job to perform, whether it is in a highly visible location/position or one which the media will never mention. In order to make the overall Air Force capability of global power/global reach successful and, more specifically, Operation Desert Shield successful, every one of us must do our job professionally. That's who the first team really is - everyone who's doing their job effectively, which by definition includes safely and timely. So, who's on the second team? The folks who get in the way of those doing their job. You know who they are, the ones who seem to complain all the time. They tell you why you can't do something rather than helping you find more effective ways to accomplish the mission. They also appear to have more than their fair share of a unit's mishaps - i.e., they tend to be part of the problem rather than part of the solution. So how do we, the members of the first team, work together to help solve this? First by continuing to set the example ourselves, by working smart on duty and playing smart off duty. We analyze what the mission is and how we can most effectively balance risk and effective training to optimize mission accomplishment. We also work with others to help motivate them to join the first team wholeheartedly or to seek a different profession one where people's lives aren't endangered by their complacency.

One group which is seldom thought of as complacent is made up of the new pilots in a squadron. If you are the standard new guy in a fighter squadron, you have a hard time chewing your food - your fangs are so long. That's great, your enthusiasm coupled with the experience you will gain produces the best fighter pilots in the world. You quickly get to the point where you're understanding more of what's going on. Soon you



want your turn at "being in charge." "I want my turn to do this " is a natural desire. But, we need to realize our commander is not just putting us off. Rather, he's waiting for us to demonstrate the ability to perform our current job in a disciplined professional manner, before he'll give us the responsibility of leading - of setting the example for others to follow.

One area we can all set the example in right now is "taking care of our people." Although the holiday season is a joyous time, it can be a time of sadness or even depression for many of our people who are separated from their families due to Desert Shield, TDYs, being single, or away from home for the first time. A little creativity and caring by us can make all the difference in the world. Have Santa taxi up in the unit's aircraft or step out of the commander's car -- the young kids will never forget it. If you're really creative, you can even get the teenagers involved in wrapping gifts, decorating, and helping to ride herd on the little ones. Be sure your unaccompanied troops and the families of deployed members are included in your unit's holiday planning. Consider including them in your own family's plans and gettogethers -- you'll both be enriched.

Happy holidays, pardner! See you in the New Year.

Jack Gawelko

JACK GAWELKO, Colonel, USAF Chief of Safety





FEATURES

DEPARTMENTS

- 4. COMPLACENCY WILL KILL YOU! Some thoughts from . Chuck Yeager
- 8. TRY HARDER AND HIS CHRISTMAS DREAM
- 14. LIVE SAFETY POSTER CONTEST

- **12. DOWN TO EARTH**
- 18. BEEN THERE, DONE THAT
- 21. WEAPONS WORDS
- 24. FLEAGLE SALUTES
- 27. FLEAGLE
- 28. SHORT SHOTS

AIRCREW OF DISTINCTION AWARDS

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HON, DONALD B. RICE SECRETARY OF THE AIR FORCE

GEN ROBERT D. RUSS



COL JACK GAWELKO CHIEF OF SAFETY

LT COL"HAP" TUCKER

JANET GAINES EDITORIAL ASSISTANT

> RON SMITH ART DIRECTOR

SGT MARK S. BAILEY STAFF ARTIST

> STAN HARDISON CONTRIBUTING ARTIST

Complacency Will KILL You!!

Some Thoughts from Chuck Yeager

Major Don Rightmyer 16 AF Torrejon AB SP



4

Courtesy of Airscoop

I had the opportunity a couple of years ago to spend almost two hours talking with retired Air Force Brigadier General Chuck Yeager. Most of us are very familiar with Gen Yeager's accomplishment when, as a captain in 1947, he became the first man ever to break the sound barrier; but Gen Yeager had a long and distinguished Air Force career of leadership and flying accomplishments both before and after that historymaking event.

Gen Yeager's flying career includes nearly 14,000 hours total time with 12,000 of it in fighters. He became an ace in the skies over Europe by downing 13 enemy aircraft, 5 of them on a single mission. Following his tour in flight test at Edwards, he returned to operational fighters in 1954 and served as a squadron commander. a wing commander twice, and vice commander of 17th Air Force. The general has always considered himself a fighter pilot, first and foremost. Although he retired from active duty in 1975, he has continued to fly at a pace which even many USAF pilots might envy. During the weeks just prior to my visit with him, Gen Yeager had flown the Northrop F-20 Tigershark, a USAF F-4E Phantom, and a Confederate Air Force P-51 Mustang with his wingman, Space Shuttle pilot Joe Engle, in a P-40.

As Gen Yeager and I discussed such topics as midair collision avoidance, GLOC, flight leadership, being a wingman, and other related areas, one of the thoughts which he continually brought up was the crucial role that complacency plays in many of our flight mishaps. Although it may not appear in the findings by that name, complacency's presence is very obvious in the circumstances that occur.

Some other far less experienced fighter pilots had told me that complacency wasn't a topic you could bring up in flying safety meetings, discussions, or articles. Aircrews didn't want to hear about it, according to them, but here was one of the foremost fighter pilots ever saying, "COM-PLACENCY WILL KILL YOU."

I'd like to share some of Gen Yeager's thoughts on complacency with you — straight from the general's mouth.

*** ON THE TOPIC OF MIDAIR:

"The one thing in my opinion that leads to a midair or possibility of midair collision today is complacency. A guy sits on the wing and he's been briefed, 'We're going to break left'; so he moves to the right wing and the flight leader ends up breaking right. The guy's sitting there fat, dumb and happy, and the next thing you know he's looking at a canopy full of airplane. The same way with pressing in on an enemy kill you really don't know what the guy in front of you is going to do. If you're pressing in at a high overtake speed and the guy pitches up and you've also started to pitch up, you've got a problem. This means that you have to stay ever alert whether you're flying the wing or the lead. I keep one eye on my wingman anytime I've



TAC ATTACK

Complacency Will Kill You!

got a formation of aircraft. It's just like defensive driving; you've got to keep your eyes open. Complacency will kill you, especially in formation. You just can't relax in an airplane, regardless of what you're doing."

*** ON COMPLACENCY AS THE CAUSE IN MANY FLIGHT MISHAPS:

"From start to finish, complacency will kill you. It's that simple. Complacency's in the pattern because you've done it a hundred times before; no sweat. Man, you smoke around and hit the ground. Normally, you don't get a second chance in a fighter . . . and you sure don't learn anything from the accident because it wipes you out. So you're not impressing anybody. That includes flying the jet into the ground. Only half the people will turn around and look at the smoking hole because they've seen it so many times before. That word complacency is very important. Sure, you concentrate and you're very alert in the harder parts of the mission because you think that's the hardest part. But when you get caught by complacency, it's a complete surprise. That's what causes a lot of accidents - sitting there fat, dumb and happy and not paying attention to what's going on."

*** COMPLACENCY AND THE INEXPERIENCED PILOT:

"A young pilot doesn't have the experience with unusual situations as an older pilot. **He must**

practice and practice and

practice. It's that simple. There's no such thing as a natural born fighter pilot. You're fooling with a piece of machinery and the more experience you get in it, the better you are. Consequently, the only things that a guy can recommend are don't get complacent and always think about what you're going to do when you find yourself in an unusual position."

*** KNOWING YOUR AIR-CRAFT, PHYSICAL CONDI-TIONING AND GLOC:

"It's not only a knowledge of your aircraft, your egress systems and your weapons systems that is important. There's also the physical capability that pilots must have — the stamina to operate those things. A tired pilot will become more complacent than an alert pilot. That's one of the important things about staying healthy when you fly these airplanes. Sure the body's a very forgiving thing, but on the other hand, it pays to keep your body tuned up just like machinery."

*** FLIGHT SAFETY — WHOSE RESPONSIBILITY IS IT?

"It's not the wing commander's job to run a good safety program. It's not the wing safety officer's or the squadron safety officer's it's everybody's job; maintenance, operations and the whole nine yards. The end result boils down, in most cases, to the pilot. You've got to know your systems, all of them, in order to survive. The point is — you can't be complacent. Because, man, the final word is, **COMPLACENCY WILL KILL YOU, AND IT'S THAT SIMPLE.**"

I don't think I could add anything to what Gen Yeager had to say. He certainly gives us a lot to think on before we go out and strap on a jet again. Like he says, "Continually ask yourself, 'What's going on around me?" and that includes a lot of things."



TAC

Outstanding Achievement in Safety Award

he 58 TTW successfully completed its first year of training with the Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) system without any LANTIRN generated mishaps. From the first sortie on 21 August 1989 through 20 August 1990, the 58 TTW, specifically the 310th Tactical Fighter Training Squadron (TFTS), new 1395 LANTIRN sorties and 1907 hours with a mission effectiveness rate of 92.1%. During this time frame, the squadron graduated 133 pilots from the LANTIRN training program, including the local instructors, the initial cadres from Nellis, Hill and Osan AB and the first pilots to go directly from undergraduate pilot training and F-16 replacement training to LANTIRN. The wing developed a safe and simple procedure to accomplish pre-takeoff tuning and boresight checks and the highly critical post-takeoff letdown checks at Luke and Nellis AFB. Additionally, procedures were developed for a direct attack profile which allowed early target acquisition and fragmentation avoidance while avoiding spatial disorientation. The squadron also participated in Red Flag 90-3, the first night Red Flag since 1982. The missions were flown as 30-40 ship packages of F-16s, F-15Es, A-7s and B-52s dropping live ord-

nance on the Nellis ranges. The squadron also developed and flew two local night live drop exercises. This involved packages of 8-10 aircraft carrying MK-82 ordnance flying simultaneous attacks on geographically separated targets. or compressed time attacks on single targets. All three exercises involved a tremendous amount of mission planning to ensure deconfliction and resulted in a flawless. performance. In order to accommodate a continuous night flying schedule, the squadron developed an innovative approach to scheduling which allowed pilots to get quality crew rest, acclimate to an extended night schedule and have adequate time with their families. Likewise, the maintenance complex developed a work schedule which allowed their LANTIRN maintainers to work a separate schedule from the other squadrons, while still providing back-up shop support to all squadrons. This provided the LANTIRN maintainers with the same opportunity for proper rest and normal duty days as the pilots. During this time frame, the maintenance statistics showed continuous improvement as the conversion to the Block 42 aircraft and LANTIRN progressed. Without a Wartime Readiness Support Kit (WRSK), the cumulative MC rate was 92.2% and scheduling effec-

tiveness was 95.1%. During the year, man-hours per sortie decreased from 21.5 to 5.8 and man-hours per flying hour decreased from 14.5 to 4.2. The 58 TTW and 310 TFTS made an important contribution to the nation's defense by their successful conversion to the Block 42 F-16C aircraft and LANTIRN. Despite delayed deliveries of both aircraft and LANTIRN pods, all classes graduated on or ahead of schedule. Because of the maturity and safety consciousness of the supervisors, pilots and maintainers, these highly demanding LANTIRN missions were completed without incident.



58 TTW Luke AFB AZ



Jimmy Campbell 1AF/SEW

t's Christmas Eve and Try Harder and his neighbor Jim have just missed dinner as they finish loading the last of the toys into a rental truck. Jim heads home to get ready before they drive off on their special delivery run. It's cold, but Try is warmed by a special sense of accomplishment. He and his neighbor had teamed up last fall to refurbish some bicycles, tricycles, and other assorted toys to give to the youngsters at the nearby orphanage. They would make great Christmas presents, and Try was looking forward to seeing the children's faces break into smiles. Try closes the rear door on the van and walks back to his house. He has slipped into his red Santa suit and is settling back in his easy chair to sip some hot chocolate. Tired, but feeling really good about what they had done, Try's

TRY HARDER AND HIS CHRISTMAS DREAM

thoughts drifted back over the events that had occurred during his many hours working in Santa's workshop on the toys.

It had been quite an accomplishment for Try and Jim to work together. Try was never one to be bothered with rules or instructions when it came to working with tools. As an avid arm chair aviator, he just felt freer working by the seat of his pants, so to speak; and he was certain it was similar to the way pilots he had read about flew by the seat of their pants. On the other hand, Jim was a "by the numbers" type when it came to doing work, and especially when safety precautions were spelled out in an instruction manual or on a warning label. Those opposite attitudes had led to some interesting moments.

Try finished his hot chocolate

as he thought of the time right after they started working together. He was getting ready to strip the old paint from some metal tricycles and had just placed the first one on the work table next to an opened can of paint stripper. He had just fired up a cigarette and was about ready to start brushing the stripper on when Jim arrived. You would have thought Try was about to blow the whole place up the way Jim started carrying on. Jim read him the riot act (or warning label from Jim's perspective) about how he should never smoke around that stuff because it might blow up. Try had additional problems because he wasn't using rubber gloves to protect his hands and he should have had goggles to keep splatters of the stuff out of his eves. Try remembered thinking to himself that it was going to



be a very long fall season before all the toys were finished.

Then there was the time Try decided to work late after lim had gone home. They had been saving up several parts that needed to be arc welded. Try figured he would go ahead and weld them so they would be cool and ready to grind smooth the next morning. Try wasn't much on those welding goggles. They were so dark he could hardly see through them even in the bright sunlight, much less after dark. He decided he would give it a try without the goggles and see what happened. He turned on the welder and struck an arc. BUZZZZZ. Heck, that wasn't so bad. He had a few spots before his eyes but they would go away. He couldn't feel anything bad; his eyes didn't hurt, so why not just go ahead and complete the job without the goggles.

After all, there weren't that many parts to weld.

Try shifted uneasily in his chair as he remembered how his eyes had felt the next morning. Something similar to having a ton of sand poured into them. He could hardly open them and everything was all blurry. But he knew he had to show up in the shop because he had already arranged it with Jim. Try had put on some of the darkest glasses he could find and went on out to the shop to greet Jim. Try hoped Jim would ignore it or at least be more kind than he usually was when he had caught Try in a big safety foul-up. For once Jim was sympathetic and only said, "I see you did a little welding last night after I went home. I bet you'll use the goggles next time."

ZZZZzzzz! Try was now motionless in his big chair. His thoughts

were fuzzy as he drifted off to sleep. He could see himself in his Santa suit sitting in his 1966 Mustang convertible with the top down. There were big bags of toys all around him. He had just taxied onto the runway after getting clearance from ATC. He eased down on the accelerator pedal, and he could feel the acceleration from the eight reindeer as they started the takeoff roll. He eased back on the steering wheel and they were airborne heading south. Wow, this was better than flying any fighter he had ever dreamed of.

He was making great time as his Mustang, pulled by the reindeer, streaked through the sky. He was about to cross the northern border of the United States when the Mustang started icing up. He turned on his windshield wipers. but that didn't help. Neither did the heater. HONK, HONK! The stall warning horn started to blow. He was in trouble now. He was about to stall and fall out of the sky! He was pushing on the steering wheel to nose it over while reindeer and toys went flying everywhere.

Suddenly, he realizes the horn sound is coming from outside. It's Jim honking the horn of the rental truck. Jim is ready to leave for the orphanage. Try shakes his head to clear it, gets up from his easy chair and thinks to himself, "I was just about to get to the best part where I would wish everyone a MERRY CHRISTMAS and a HAPPY NEW YEAR."

9

Master Sergeant Herbert J. Rogow, 366th Tactical Fighter Wing, Mountain Home AFB ID, was on a routine flight line inspection when he noticed an aircraft panel being opened forward of a running engine on an F-IIIA. Facing a potentially serious FOD problem, Sgt Rogow immediately stopped the maintenance work and notified Quality Assurance and the maintenance unit OIC, thus correcting the error on the spot. This is but one of many examples of Sgt Rogow's diligence, not only on the flight line, but in everything he does relating to smart mission accomplishment at Mountain Home AFB. As the maintenance focal point in the wing safety office, Sgt Rogow keeps business running smoothly. He responds to every emergency called in and was the OPR for five Class C mishaps this quarter. One of the mishaps which he followed was a forward equipment bay fire. He ensured the proper procedures. were taken, from a maintenance standpoint, to determine the costs and extent of damage. He advised the chief of safety and the denuty commander for maintenance on the investigation. Without his persistence and experience, the costs



TAC

Flight Safety Award of the Quarter

> MSgt Herbert J. Rogow 366 TFW/SEF Mountain Home AFB ID

could easily have jumped to Class B status, When Mountain Home AFB remstated the runway operations monitor (ROM) program, Sgt Rogow took the initiative to add the ROM to his daily inspections. Discovering errors and inabilities by trainers not normally associated with flight line operations. he advised the chief of flight safety resulting in quicker ROM upgrades and a very qualified cadre. Sgt Rogow updated the deployed safety kits for use by units when away from Mountain Home AFB. They're now in checklist format and ensure that flight line safety is of the same high quality as at the home station. The true test of his abilities came during the May 1990 UEI. Briefing the TAC Inspector General and showing how we respond to actual emergencies, he played a direct part in the Excellent rating received. Special recognition was given to the mid-air collision. avoidance program he manages. MSgt Rogow's consistent desire and drive to reduce the mishap rate and accomplish the mission at Mountain Home AFB earned him the TAC Flight Safety Award of the Quarter.

Beginning in October 1988, Teehnical Sergeant James E. Thompson, 347th Aircraft Generation Squadron, 347th Tactical Fighter Wing, managed the Ground Safety Program for the largest squadron at Moody AFB. Prior to his arrival, the program had been rated "Unsatisfactory." His initiatives and personal drive worked together to turn that rating into an "Excellent" this year. He avoided "quick fix - Band-Aid" solutions and chose rather to use his foresight and ingenuity to establish and promote an active Unit Safety Council. He utilized the council as a focal point for getting everyone from the commander to the airman on the flight line personally involved with finding "smarter methods" to accomplish the mission. Sgt Thompson often highlighted problem areas to the council, which allowed him to draw upon their wide base of expertise to help develop and implement workable solutions. One of those solutions implemented by Sgt Thompson was the creation of an effective motorcycle operator's program. Each base motorcycle rider received a personal briefing on the unique dangers of motorcycle operation and those extra risks in and around Moody AFB. His pro-

gram resulted in greater safety awareness by the riders and a reduced motorcycle mishap rate Sgt Thompson also developed a

TAC

Ground Safety Award of the Quarter



TSgt James E. Thompson 347 AGS, 347 TFW Moody AFB GA quarterly Safety Flyer which addressed the conreportable mishaps in the squadron. The causes of the mishaps were discussed, along with positive measures, which any section could then use to prevent a similar recurrence.

Sgt Thompson served as the catalyst which revived the squadron's "We Care About You" program. His personal involvement with the identification of high profile individuals, and the counseling support they received, directly improved the unit's safety record for both on and off duty, Recently, Sgt Thompson developed a basewide DUI Prevention Hotline, which personnel who feel they shouldn't drive can call and receive a free ride home. He laid the ground work by arranging for vehicles, developing a roster of volunteer drivers, and then distributing 2,000 informational cards to Moody people and local drinking establishments. This program is one of the many ways he is working with the base and the community to promote safety awareness.

Sgt Thompson's dedication to his squadron's safety education and mission accomplishment has sarned him the TAC Ground Safety Award of the Quarter.





ITEMS THAT CAN AFFECT YOU AND YOUR FAMILY HERE ON THE GROUND

People Have Nine Lives?

Cal Faile HQ TAC/ISEG

Have you heard the old saying that, "Cats have nine lives"? I believe that some people have nine lives too. They must have the way they drive. During a recent trip to South Carolina on I-95, I made some observations that convinced me that some drivers either have nine lives, an unfulfilled death wish, or don't believe that automobiles can definitely kill. Take for instance the Mercedes Benz that blew by me doing at least 90; I thought the tail end was on fire,



but it must have been the diesel smoke from the gas pedal to metal. A brief glimpse revealed that the driver was probably in their seventies, so age is no restriction on speed.

Then there were two eighteen wheelers, one was attempting to pass the other at a slightly faster speed than sixty miles an hour. I was behind the truck in the right lane. Suddenly, a Cadillac passed me on the right using the narrow emergency pull off asphalt lane. He must have been doing between 70-80 MPH, and it was raining. He narrowly squeezed between the truck and a bridge guard rail before he could pull in front of the truck. By this time, I was well behind all three because I just knew there was going to be a collision. The guy in the Cadillac must have used his "ninth life" on this one, and I used up one just watching the near miss.

At the Virginia and North Carolina line, traffic was backed up several miles due to road construction. Some drivers decided they really shouldn't have to wait in line and chose to use the median strip and emergency pull off lane to pass the backed up traffic. I kept watching for someone to open a door to see what



was holding up traffic, but thankfully no one did or they might have lost a door.

We were well into North Carolina, and I was cruising along at 60 MPH (believe me). The rain had stopped, but the pavement was still wet. I was passing another slower moving vehicle when I happened to take a second look into my rear view mirror. All I could see was the front-end of what appeared to be a sports car flashing his lights for me to move out of his way. He was not there a few seconds before when I cleared the left lane to pass. I accelerated around the other vehicle and returned to the right lane, and the sports car passed me like I was sitting still. Guess I got on his nerves. As the sports car entered a curve, I spotted a highway patrolman in the northbound lane quickly decelerate, cross the median and head south after the sports car. It took the highway patrolman approximately ten miles to catch up with him. I wonder how many lives he had used up.

It's strange how some slower moving vehicles will speed up when you start to pass them or after you pass them they will speed up and get right on your bumper. There are others who start to pass, get right beside you and stay there until you approach another slower moving vehicle causing you to disengage your cruise control and slow down. It sure is aggravating. Then there are always those Sunday drivers who travel along at 55 MPH in a 65 MPH zone. They don't realize they are just as hazardous as those doing 75 MPH in a 65 MPH zone. Disrupting the flow of traffic is hazardous in either case. There are others who love to drive in the passing lane.

After departing I-95, I was convinced that it should be called "suicide strip" because each time you get on it you take your life in your hands. You have to drive more for the other person than you do yourself which is defensive driving. After all the near mishaps, I was glad to be nearing my final destination. Just a mile to go and right in front of me a car runs a red light at an intersection and collides with another vehicle. Everyone was wearing their seatbelts and no one was injured, including a three-month-old baby who was riding securely in an infant's car seat. You can never foresee where the next mishap will occur. Maybe I-95 "suicide strip" was not so hazardous after all — at least there were no mishaps.



LIVE SAFETY POSTER CONTEST

have come to your mind. We would welcome your suggestions on how people in TAC can move from just thinking about a slogan to living a safer lifestyle. We welcome any inputs, but we are specifically sponsoring a poster contest. Entries should help motivate our folks to "Live Safety." You may send in a finished poster or, if you draw like I do, just send a sketch of your idea(s). Please include your name, address, and phone number so we can notify you when your entry is selected for publication in *TAC Attack*.

Ed

I n the October issue, Brigadier General Ball shared an excellent article on why we need to "Live Safety" rather than just "Think Safety." He emphasized that knowing what is the correct or safe thing to do is not enough. We must take that vital step that transforms our knowledge from the purely theoretical level into some form of practical application. For example, knowing statistically that seat belts will reduce my chances of being seriously injured during an automobile wreck isn't enough! I have to take action on that knowledge -- i.e., fasten the belt -- or the knowledge hasn't done me any good at all!

Which leads us to the next point: Knowing we need to motivate people to "Live Safety" is not enough! Somehow we need to make it happen. There are many ways available to help us do that -- commander involvement, articles in TAC Attack, positive peer pressure, or posters may





















Wrestling with the Rhino

Lt Col Scott Wales HQ TAC/ISER

"History is Bunk." -- Henry Ford

"History repeats itself, and that's one of the things that's wrong with history." -- Clarence Darrow

C onventional wisdom would indicate we should have learned all of the Phantom's flying quirks by now. Although the Air Force has been flying the Phantom with distinction since 1962, our recent mishap experience indicates some of us haven't quite mastered the skill to fly it yet, or may have become complacent about it.

Many weapons systems'

mishap rates increase as they depart from the inventory, and the F-4 seems to be following this trend. The rising number of loss-of-control mishaps have accounted for 33 percent of all TAC F-4 mishaps in the last five vears and over 50 percent of F-4 mishaps in the ANG. Tragically, the numbers took a dramatic turn upward in calendar year 89, particularly in the area of loss-of-control. In FY 90 there were three loss-of-control mishaps, and so far in FY 91 there has been one.

So what's the problem? The Phantom is subject to dihedral effect and adverse yaw at high angle of attack maneuvering, but neither is unusual in swept wing century series aircraft. The aircraft's performance characteristics should be well known by now; but just in case they're not, here's a few points of interest to review.

Angle of Attack (AOA) is one of the primary indicators of aircraft performance. AOA indications may lag during high pitch rate maneuvering; and large rudder inputs may cause excursions up to 10 units, unless forward stick inputs are also applied. Inputs with ailerons under such conditions are unwise, unless you're aiming for the ultimate "jink out."

Most of you know already that "Old Double Ugly's" flight characteristics are quite variable throughout the flight envelope. However, the aircraft is fairly predictable and gives more than adequate warning in most conditions through aircraft buffet, AOA indexer and tone, and the pedal shaker. Pay attention to these indications! In almost all cases, the cure for control loss is simple --UNLOAD. If you're one of the few who haven't seen the movie "Unload for Control," get it. This film is an oldie, but the advice it contains is timeless for the F-4 driver. A smooth push over to achieve 3-8 units AOA will prevent or correct most stalls and departures. Certain aircraft configurations are more likely to result in loss-of-control than others. Full or almost full centerline tanks are particularly suspect and have been investigated as a possible cause in several mishaps involving departures from controlled flight. The tank (or tanks) should be empty before BFM/ACM engagements. The dash one cautions that external stores generally increase pitch sensitivity and nose rise tendencies. Inertial effects are not noticeable during rolling maneuvers, often resulting in roll or "kinematic" coupling if AOA is high and inputs are maintained beyond 360 degrees. The dash one prohibits such maneuvers for this reason. Combined inputs of roll, pitch and/or yaw can cause the aircraft to depart without traditional stall warning indications, such as buffet, wing

rock, or nose slice.

At high altitudes, a "significant change" in aircraft handling characteristics occurs between 0.92 and 0.95 Mach. In this regime, a slight nose down moment, or a heavy feel to the nose, may be noted on acceleration. Stick lightening or nose up pitch moment is likely upon deceleration, particularly under high G forces and with speed brakes out. This "dig in" tendency when slowing down can result in stall or loss-ofcontrol unless the aircrew is prepared for the phenomenon.

At low altitude, the pilot induced oscillation (PIO) becomes a big player, particularly near the Mach. From about 475 knots indicated up to .95 Mach, stick sensitivity increases rapidly and over control becomes much easier to induce. Afterburner termination, trim malfunctions, and flying with pitch augmentation off can all create such problems, particularly in combination with aggressive maneuvering by the pilot.

At some airspeeds, roll authority with both aileron and rudder may not be sufficient to stop a roll induced by increased G and an asymmetric store. The roll will be toward the store. Normal cues of an impending stall may not be present; thus it becomes critical to prevent such situations from developing, rather than trying to remedy them after the fact. Unload! Smooth control inputs and immediate reduction of AOA are required at the first indication of impending departure.

Don't forget the drag chute! This is your next best move, especially if the aircraft doesn't recover quickly. Several Rhinos have ended up as smoking holes because the crews omitted this step. It's always better to suffer the embarrassment of coming home without your drag chute than that of coming home without your Phantom.

The aircraft may continued to produce large excursions in all three axes as it recovers. If you've got some altitude, be patient. Keep the stick full forward, and don't try to chase the AOA gauge -- at this point it's often unreliable and may produce an erroneous indication. Keep that stick forward until ALL roll and yaw motions cease. Many aircraft have been lost at this point, when the pilot assumed he was flying and overcontrolled the aircraft into a second stall or departure. Aircraft buffet will tell you you're about to repeat the cycle. Once you're really flying again, dump the drag chute (if it hasn't been blown out or burned out) and advance the throttles, since the Rhino will not accelerate above 240 knots in idle with the drag bag out. If all else fails, and you're passing 10,000 feet AGL, EJECT!

If much of this article looks familiar, it's because it's been largely paraphrased from the dash one. A little review of Chapter Six will show you the source material, which is lengthier and maybe better written. Dust your dash one off and dig in -- there's a lot of good information there -- maybe enough to save your life!

ellis AFB, Nevada, home of Red Flag and Green Flag. provides the most realistic combat training in the world for both pilots, ground support and weapons personnel. Technical Sergeant Jimmy D. Storch of the 57th Equipment Maintenance Squadron, 57th Fighter Weapons Wing: Nellis AFB, is the Red Flag munitions expert. His exceptional leadership and technical skill was demonstrated in his supervising. over 200 munitions personnel many of whom were TDY to the largest, most complex conventional munitions operation in the Air Force. He conducted training on over 1,000 different munitions line items and established demanding standards for performance in the build-up of live munitions, enhancing war skills throughout the Tactical Air Force. By coordinating the actions of all Red Flag and Green Flag exercise munitions support personnel annually, he became one of TAC's prime experts on conventional air munitions production. Sgt Storch spearheaded build-up and storage efforts while he maintained overall control of 3 million dollars in explosives assets during each event. He actively involved himself in every aspect of munitions maintenance and was the expert. on the application of explosives safety directives to ensure the mission was accomplished effec-

tively and safely. He ensured the

safe and optimal storage, assembly, and delivery of over 366 tons, of munitions. His tircless efforts throng Red Flag 90-2 ensured yet another accident and incident-free exercise.

TAC

Neapons Safety Award of the Quarter

> Sgt Storch emphasizes effective mission accomplishment, and munitions safety as an essential ingredient for success. As soon as TDV munitions augmentees arrived at Nellis AFB, Sgt Storch personally briefed them on the importance of explosives and ground safety to inhibit mission accomplishment. By reviewing training records and MMICS documentation, he ensured personnel



TSgt Jimmy D. Storch 57 EMS, 57 FWW Nellis AFB NV received the necessary training and supervision to meet and exceed the Air Force standards. Sgr Storch's training program was listed by firs superiors as the major reason for the zero weapons mishap rate for Rei Flag participants at Nellis AFB and the well deserved "Excellent" rating during the Dec 89 HQ TAC Unit Effectiveness Inspection.

Set Storch's participation on the soundron explosives safety council provided rapid dissemination of information pertinent to the continued safety and effectiveness of all assigned personnel. His spot inspections of the munitions holding area and maintenance facilities corrected numerous deficiencies before they were able to contribute to a mishap. Sgt Storch developed an excellent visual display board that includes procedures for mishap notification, hazard reporting safety crosstell letters, and general safety information. The information was organized in an easy to read, logical format in an unlocked display case which allowed personnel to remove items of interest for reading. His continuing efforts to promote weapons safety, otwious concern for the welfare of his personnel, and drive to accomplish the mission in this most demanding munitions environment have earned Sgt Storch the TAC Weapons Safety Award of the Quarter.



WEAPONS WORDS

ARE WE JUST LUCKY?

MSgt James M. Aust, Jr. TAC/ISEW

During an Explosives Ordnance Disposal (EOD) range clearance operation, an EOD specialist was attempting to detonate in place a MK 20 "Rockeye" anti-tank bomblet (MK118). Standing beside the bomblet with the nose oriented to his left, he placed a C-4 charge adjacent to the bomb body. Unfortunately, he failed to follow the technical order procedure to secure both ends of the fuze. He then stood up and ignited the four-and-a-half minute time fuze. When he released the fuze, he detected what he thought was movement of the bomblet out of the corner of his eye. When he turned to see what the movement was, the bomblet detonated. Injuries resulted in four large linear lacerations from the bomblet base plate which ran just above the knee to the top of his thigh, severing his femoral artery. Only the superior first aid knowledge and techniques of his coworkers prevented him from bleeding to death.

In another case, two munitions maintenance specialists obtained, without authorization, two unserviceable foreign 30mm aircraft gun ammunition from host nation stocks in the munitions storage area. One individual had disassembled one round to remove the propellant. While attempting to remove the propellant from the second round, it exploded. After the smoke cleared, the munitions specialist was missing the third and fourth fingers from his left hand.

Another area of concern is an increase in the number of incidents involving live munitions inadvertently left in containers turned in for recycling. In most cases, the munitions were discovered later by civilian recycling companies who purchased the containers. One case involved a MK 20 "Rockeye" antitank cluster bomb unit. As the container was being prepared for a crushing machine, the lid was removed exposing the live MK 20. Also in a similar scenario, three 35mm practice rockets were found in an ammunition can. Both of those containers were certified as empty and had been sealed by a munitions inspector.

Causes of the above mishaps and incidents were attributed to lack of discipline, complacency, and lack of supervision. Failure to adhere to technical order procedures (Discipline); haste, boredom, repetition, (Complacency); and awareness, directing, controlling (Supervision) were all key players for these mishaps and potential mishaps. Munitions, by their nature, are inherently dangerous. As munitions personnel. we are all subject to some risk; but why increase those risks. We all have a responsibility to ourselves, coworkers, subordinates and to the USAF to reduce or eliminate unnecessary risks associated with munitions. If you were to ask anyone, "When was the last major munitions mishap experienced by the Air Force?" most would reply, "During Vietnam." Well, I disagree. An EOD specialist almost bleeding to death on a range; a munitions specialist missing two fingers from his hand; and a live MK 20 "Rockeye" ending up in the hands of the civilian community are major mishaps or potential major mishaps. Let's be smarter with explosives - not just "Lucky."

WHERE IS YOUR AI

ake a second and look at our masthead on page 4 where our magazine's staff is listed every month. You'll notice that there are no staff writers assigned to us here at TAC ATTACK. That's because most of our writers are located out there in the field-those of you who read the magazine. We rely on you to help us put the magazine together on a monthly basis. We need your inputs to make TAC ATTACK relevant, timely and interesting for you, your daily needs and your co-workers throughout the TAC workplace; whether it's the flight line, the cockpit, the avionics shop or the office.

I know a lot of you have thought about writing an article for us, but just never seemed to get around to it. Let me encourage **you** to take the time **now** to put your thoughts and experiences down on paper so we can share them with everyone else in TAC. You'll be glad you did and we certainly will as well.

What kinds of articles are we looking for? You name it and

we're looking for it. We can use your "There I Was" accounts of personal experiences where you or someone you know learned a valuable (and sometimes painful) lesson from which the rest of us can benefit. But, we're not just looking for the "bad news" type of experiences. Have you ever found yourself in a situation that was rapidly going downhill and you were able to prevent a potential mishap by breaking the chain of events? Tell us about it. Your personal experiences put real flesh and bone details around the principles of working and flying safely that we talk about each month.

For example, we need to hear from you maintenance types about how you operate in and around the flight line on a daily basis in all kinds of readiness conditions and weather. What standards of excellence do you operate by that prevent you from having some of the kinds of mishaps we write about in "Chock Talk"? How do you relate to all the other activities around the ramp that get the mission done in a safe and efficient manner? Tell us how you go about maintaining aircraft, launching sorties, loading ordnance, repairing avionics and all the other factors vital to accomplishing our mission.

For you fighter jocks, (pilot, WSO, EWO or whatever) we need your thoughts on how and where we can fly tactically smarter (and safer as a result). Don't assume that what you're doing right is common knowledge to everyone else in the command. There are a lot of good ideas being used on a daily basis that will serve as a good reminder for some of us and as new insights for others.

No one in TAC should feel left out from our "unofficial" staff of writers. I wouldn't even attempt to list all the career fields that are a part of the TAC team. If you haven't found an article in the magazine that hits your area of concern, it may be because you haven't written an article for us.

Finally, if what you've been waiting for is a personal invitation, here it is:

W - JW





FLEAGLE TAC'S OUTSTANDING AIRMEN

During the second engagement of a two versus four engagement, the number two F-16 of the two-ship was in a turning fight when the pilot, Major Gregory R. Farr, 134th Fighter Interceptor Squadron, 158th Fighter Interceptor Group, Burlington, Vermont, noticed a slight bump followed by degraded aircraft response. The flight was knocked off and an immediate recovery setup. It took 85% to maintain 250 knots, level flight at 13,000 feet. As Major Farr's wingman rejoined to do a battle damage check, he noticed the left trailing edge flap mounts had broken and the left flaperon had rotated through 135 degrees and was lying on top of the fuselage. The flaperon remained in this position for the remainder of the flight. An emergency was declared and a recovery to Plattsburgh AFB was initiated. Major Farr, having looked through his checklist, realized that there were no written procedures to specifically address this emergency. Maj Farr decided that a controllability check should be performed with the leading edge flaps locked out

and the landing gear alternately extended with the gear handle up to decrease the chances of any asymmetric flight control inputs. The gear was alternately extended and a controllability check was performed. The aircraft showed good flight characteristics down to 160 knots. Maj Farr decided to fly a straight-in approach at 180 knots and touch down at 160 knots. The supervisor of flying who was providing assistance agreed that Plattsburgh Air Force Base was the best alternate because of the runway length and availability of cables. Taking into consideration the closed nozzle, no nose wheel steering, and the higher landing speed, the decision was made to stop straight ahead after landing. The approach and landing were uneventful, and the aircraft was brought to a stop at the end of the runway. Maj Farr demonstrated superb abilities by remaining calm and carefully analyzing the situation to bring about a successful conclusion to this emergency. The decision to perform a controllability check, using the alternate gear lowering procedures and leaving the gear handle up, demonstrated excellent knowledge of the aircraft systems and helped prevent the possible loss of a valuable fighter. The calm and professional manner in which he handled this critical in-flight emergency earned Major Farr a **Fleagle Salute.**

The 405th Tactical Training Wing, Luke AFB AZ, successfully completed its first year of flying the F-15E Dual Role Fighter equipped with the LANTIRN terrain following and infrared imaging system. The unit became the first TAC wing to maintain and fly the sophisticated F-15E/LANTIRN system combination on a routine day-to-day basis. The initial F-15E LANTIRN sortie at Luke AFB occurred on 22 May 1989, and through May 1990 the 405 TTW did not have any LANTIRN generated mishaps. To achieve this skillful level of mishap-free LANTIRN flight operSALUTES

ations, the 405 TTW established the first LANTIRN pod maintenance facility in the Air Force. Despite numerous integration problems associated with fielding a major new system, this facility regularly produced safe functional LANTIRN pods, resulting in a 97 percent effectiveness rate. Also, to ensure safe flight operations, the 405 TTW developed thorough LANTIRN systems checks and aircrew procedures to validate proper terrain following operation prior to commencing low level flight at night or during the day. During this time frame, the 405 TTW was continually challenged by intermittent parts shortages and routine failures of several key preproduction subsystems. The unit safely overcame these deficiencies and all training classes graduated early or on time. The combined ingenuity and safety consciousness of 405 TTW operators and maintainers from May 1989 - May 1990 culminated in 2.815 hours of mishap-free LANTIRN flight operations and have earned the Wing a Fleagle Salute.

area. Staff Sergeant Kerry S. Davis of the 836th Air Base Operability Squadron, 836 CSG, 836 AD. Davis-Monthan AFB AZ. loaded the EOD response vehicle with the necessary equipment and proceeded to the Entry Control Point (ECP). At the scene, Sgt Davis found the MK-82 bomb with its tail resting on the trailer and extender. The nose was resting on the ramp supported by the M904 fuse that was cracked open. Sgt Davis, using the appropriate technical data, determined the condition of the fuse. After the area was cleared, he used a jammer with a bomb sling to lift the damaged bomb and place it on the ramp. Sgt Davis then performed RENDER SAFETY PROCE-

Explosive Ordnance Disposal

(EOD) was notified that a live

MK-82 bomb with an M904E3

nose fuse and an M905 tail fuse

had been dropped in the live load

DURES (TSgt Hufford provided safety back-up). The bomb, with the tail fuse wired safe, was then returned to the load crew. The damaged M904 fuse was taken to the EOD disposal range and detonated.

The following day, the command post called and stated they had an A-10 aircraft that had landed. but had an unsafe gun. The dearm gun crew had spent three hours unsuccessfully trying to get the gun to rotate so the firing/safing cam could be pinned in the safe position. After accessing the situation, Sgt Davis requested permission to blow the gun. Once the permission was received, the gun was removed and transported to the EOD disposal range where Sgt Davis detonated it with two MK-2 shape charges. This procedure safely detonated the live rounds that were stuck/jammed in the barrel. The gun was returned to the Armament shop. These two incidents were handled in a professional, safe, and efficient manner and earned Sgt Davis a Fleagle Salute.

Technical Sergeant Larry LeBlanc. 555th Aircraft Maintenance Unit, 405th Aircraft Generation Squadron, 405th Tactical Training Wing, Luke Air Force Base, Arizona, was performing a dual engine run on an F-15 aircraft to check-out both airframe mounted accessory drive (AMAD) 50 percent switches. The first dual engine start proceeded as planned. Both engines were shut down without incident after running approximately 10 minutes. After both engines stopped rotating, a reverse start sequence was initiated. Again both engines started normally. Satisfied with the operational check of both 50 percent switches, maintenance operations center (MOCC) was notified of the termination of the engine run. During engine shut down, both engines dumped fuel from the pressure and drain valve located on door 113 and a flash fire broke out on the underside of the aircraft. Sgt LeBlanc saw the flash fire and shouted "FIRE," and proceeded to fight the fire. About 45 seconds after the first sign of the fire, he had extinguished the flames. Through the bravery and professionalism of Sgt LeBlanc, the potential loss of



TAC

Crew Chief Safety Award

TSgt Larry LeBlanc 555 AMU, 405 AGS, 405 TTW Luke AFB AZ

life and damage to a multimillion dollar asset was prevented allowing the aircraft to remain fully mission capable. On a separate occasion, Sgt LeBlanc was performing aircraft launch procedures on an F-15 aircraft. The number two engine start was uneventful and all systems were normal. Sgt LeBlanc cleared the pilot for number one engine start and positioned himself to observe the start attempt. At this point. he noticed smoke and flames coming from the jet fuel starter (IFS) exhaust. He notified the pilot of the fire and directed him to perform emergency shutdown procedures for the IFS and the number two engine. Knowing the potential for a flash fire, Sgt LeBlanc used the ground halon fire extinguisher to cool both the fuel dump masts and the hot ground directly beneath the aircraft, in anticipation of the dumping of the hot residual fuel. Noticing that the IFS fire did not extinguish, he then directed the aircrew to ground egress while he extinguished the fire. The ground emergency was soon terminated. Sgt LeBlanc again proved he possesses a level head under pressure and reacts properly during emergencies.

Sgt LeBlanc's knowledge of the F-15 safety procedures and his demonstrated professionalism directly prevented major damage from occurring to both aircraft and earned him the TAC Crew Chief Safety Award.





HOLIDAY CHECKLIST

Have a safe holiday season. Use this checklist: Toys

• Don't buy toddlers toys made of brittle plastic or having sharp edges.

• Plug-in electric toys should have a testing laboratory label.

• Chemistry and tool sets should include safety goggles.

• Note that most accidents involve bicycles, skateboards, roller skates, sleds, toboggans, snow disks, and anything with projectiles, like BB guns, darts, bows and arrows.

Lights

Only use lights that have a testing laboratory label.

• If your lights, new or old, have broken sockets, frayed wires, or loose connections, replace the set.

• Never use electric lights on a metal tree.

• Don't overload extension cords. Three sets of lights per single cord is the maximum. Protect wires

from injury-don't run them under rugs.

• Outdoors, use only lights and extension cords specifically made for outdoor use.

• Always unplug all lights before you go to bed or leave the house.

Trees

• A fresh tree is best—the needles shouldn't fall off easily or break when bent.

• Cut one inch off the base and keep the tree in water both before and after you set it up.

• Don't use real candles on a tree.

Plastic trees should have a fire retardant label.

• Place tree away from fireplaces, heat registers, and radiators. And make sure the tree isn't blocking doorways.

· Use unleaded trimmings.

• Keep all decorations out of the reach of small children.

Gift Wrapping

• Don't burn gift wrapping, boxes, cartons, or packing material in the fireplace.



Parties

• If you use candles at your party, don't place them near curtains, doorways, or plastic and paper decorations.

Use nonflammable holders for candles.

• Use flame retardant or noncombustible decorations and Santa costumes.

• After a party, check everywhere for smoldering cigarettes, especially under cushions, behind furniture, and in waste baskets.

TAC Outstanding Achievement in Safety Award



SrA Christopher E. Nuckols 48 FIS/MA Langley AFB VA

Senior Airman Christopher E. Nuckols of the Component Repair Branch, 48th Fighter Interceptor Squadron, Langley AFB VA, was directly responsible in preventing a major aircraft mis-

hap. While performing a third hourly postflight inspection on an F-15A. Amn Nuckols was inspecting the left stabilator actuator and connecting flight control hardware in panels 118L and 123L. Using a mirror and flashlight, he discovered a castellated nut from a flight control bolt laving in the bay area outboard of the left stabllator actuator. Further investigation revealed an unsecured close tolerance bolt (used exclusively on flight controls) wedged between a control "rod-end" and the left servo input control arm. Had this bolt migrated and dropped out, the control rod would have been disconnected from the servo-input control arm. Although the servoactuator has a built-in backup sys-

tem that places the stabilator in a neutral position if there is a flight control hardware or hydraulic failure, any amount of force applied to the serve-input control arm would override the neutralizing system and induce an uncommanded pitch input, possibly causing loss of control of an aircraft in flight. Amn Nuckols removed the nut, bolt, and washer, inspected the components, and made the necessary repairs. His comprehensive inspection skills coupled with intense attention to detail prevented a major catastrophe from occurring, Amn Nuckols' system familiarity and integrity earned him the TAC Outstanding Achievement in Safety Award.



Aircrew of Distinction

aptain James D. Murray, an-FTU instructor pilot, was number four on an F-16 surface attack continuation training sortie. After a normal mission on the bombing range, he was executing a reioin off-range at 3,000 AGL and 300 KIAS when he noticed a Master Caution light with associated "P. R. and Y" Flight Control System (FCLS) warning lights also illuminated. Capt Murray tried resetting the FLCS lights, but they immediately came on again. He completed the appropriate checklist items, informed his flight lead that he would require a straight-in approach. and an IFE was declared.

Approximately 5 minutes later. Capt Murray experienced a Dual FC fail light, indicating a second failure in at least two branches of at least one FLCS axis. He quickly reaccomplished the checkhat items for P. R. and Y malfunctions and checked his FLCS power lights to determine which brake channels would be effective. All channels checked good. At 1,600' AGL when he lowered his landing gear to configure for the approach and as the airspeed slowed below 230 KIAS, the jet began an uncommanded role to the right with approximately 120 degrees of

bank change. Can Murray required full left stick pressure to counter the rolling tendency and

TAC

Award



Captain James D. Murray 62 TFTS, 56 TTW MacDill AFB FL

returned to level flight. He immediately accelerated and climbed to 5,000' AGE to perform a controllability check. After cycling the gear several times, be determined that with up to full left stick pressure. he could maintain level flight down to 190 KIAS: He also noticed that the roll trim would automatically move full right as the gear lowered. With the gear up, Capt Murray then disconnected the stick trim in a neutral position and reconfigured for landing, still experiencing the hard right rolling tendency. Since fuel was not a factor, Capt Murray flew a series of four approaches to MitcDill's runway to get a better feel for landing the F46D at a higher than normal speed with the aggravated roll input. On his full stop approach. he flew a flat, fast straight-in and touched down at 195 KIAS with just enough roll control to keep tize wings level. The aircraft was taxwed clear of the runway and shut down uneventfully.

Capt Murray's expert airmanship and coolness under pressure allowed him to regain control of a potentially hazardous situation and recover a valuable TAC resource. This outstanding airmanship earned him the TAC Aircrew of Distinction Award.

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	FY9D	1.8	2.8	27	3.0	2.4	27	2.8	2.9	. 2.8	27	28	32
ANIC	FY91	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ING	FY90	0.0	0.0	1.6	1.2	0.9	0.8	1.3	2,2	2.4	2.2	2.0	2.2
AED	FY91	0.0	0.0	0.0	0.0	0_0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ULK	FY90	20.4	11.2	8.2	5.9	4.7	77	6.4	5.5	4.8	4.4	4.0	3.6
Tot	FY91	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
·oral	FY90	2.4	2.5	27	2.6	2.1	24	2.6	2.9	2.8	2.7	26	30
MON	TH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

TAC'S TOP 5 thru OCT 1990

1st AF	9th AF	12th AF
COMMA	ND CONTROLLED CLASS A MIS	HAP FREE MONTHS"
48 FIS	55 507 TAIRCW	53 388 TFW
57 FIS	40 1 TFW	42 479 TTW
325 TTW	21 363 TFW	.84 355 TTW
	19. 56 TTW	33 366 TFW
	M 31 TFW	28 27 TFW
ANG	AFRES	DRUS
"COMMA	MDICONTROLLED GLASS A MIS	HAP FREE MONTHS"
119 FIG	114 482 TFW	169 552 AWACW
147 FIG	111 924 TFG	60 28 AD
110 TASG	99 906 TFG	39 USAFTAWC
177 FIG	74 507 TFG	USAFTFWC
120 TEC	51 OT TEC	
	1st AF "COMMA 48 FIS 57 FIS 325 TTW 325 TTW ANG 10 FIG 147 FIG 110 TASG 177 FIG 128 TEC	1st AF 9th AF 'COMMAND CONTROLLED CLASS A MIG 48 FIS 65 507 TAIRCW 48 FIS 65 507 TAIRCW 1 57 FIS 40 1 1 FW 325 TTW 21 363 TFW 19 325 TTW 11 31 TFW 11 31 TFW 11 31 TFW 11 ANG AFRES COMMAND/CONTROLLED CLASS A M/S 114 119 FIG 114 482 TFW 11 147 FIG 111 924 TFG 11 110 TASG 99 906 TFG 129 177 FIG 74 507 TFG 129

